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**Energy Efficiency  
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# Biomass Program

## Integrated Biorefineries R&D

### AgraPure Mississippi Biomass Project

This Congressionally-mandated project seeks to develop business plans to guide the deployment of two bioenergy plants in Mississippi. One of the plants will convert biomass to heat and power via a thermochemical process such as gasification. The other facility will produce biodiesel, ethanol, and other byproducts from vegetable oil. The vegetable oil processing plant will employ novel oil extraction processes to recover oil from the seed and convert it to biodiesel using conventional transesterification processes. The byproducts of the process will be converted to ethanol and other

byproducts using thermochemical or fermentation methods.

#### R&D Pathway

As part of the business plan development, researchers will evaluate: 1) the overall economics of both operations (debt servicing, labor, operation, and sales), 2) feedstock assessments to identify availability, costs, collection techniques, transportation, storage, and other issues with feedstocks (e.g., odor), 3) technology assessment of the potential conversion processes, 4) potential product markets, both regional and local, and 5) financing options.



Project Team (left to right): Bill Harrell, Wesley Broadhead, Dean Blackwell, Jennifer Meadows

#### Benefits

- Provide new revenue streams for the Mississippi agriculture industry
- Reduce dependence on fossil fuels

#### Applications

This effort will lead to the construction of two new bioenergy facilities.

#### Project Partners

AgraPure, Inc.  
Mississippi Alternative Energy  
Alliance  
Mississippi State University

#### Project Period

FY 2003 – FY 2005

For more information contact:

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Visit the Web site for the Office of the  
Biomass Program (OBP) at  
[www.eere.energy.gov/biomass.html](http://www.eere.energy.gov/biomass.html)

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**A Strong Energy Portfolio for a Strong America.** Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.